

Dispatcher-assisted AED use: A scoping review

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Background: Early defibrillation of out-of-hospital cardiac arrest (OHCA) patients is a key step in the chain of survival. Public-access defibrillation is an important area where emergency medical dispatchers can have an influence on guiding bystanders to automated external defibrillators (AED) and using them safely and effectively to deliver a shock.

Aims: This scoping review aims to look at relevant studies relating to dispatcher-assisted public-access defibrillation and its influence on rates of AED retrieval and use, and patient outcomes.

Methods: MEDLINE, EMBASE and Cochrane libraries were searched with an electronic search strategy, as well as citation and related article searches. The database search returned 8 studies and a further 12 were identified from related articles, citations, and professional contacts. The studies were a mix of real-life observational and simulations, including randomized controlled simulations.

Results: The outcomes assessed were rate of AED retrieval and use, time to shock or first rhythm analysis, AED competence, scripts and specific language, time and distance travelled to shock, and use of video or mobile geolocation assistance. Rates of use and competence were generally higher, and time to shock was lower when bystanders received dispatcher assistance. Voice and video assistance were comparable in terms of outcome. Several studies had a high risk of bias due to the observational nature and some simulations had problems with randomization methods.

Conclusions: The review found that dispatcher assistance has the potential to improve several outcomes associated with the rate and quality of bystander AED use. There is a need for further good quality research in this area as early defibrillation by lay people will result in better OHCA survival rates and outcomes.

